

REMARKS

The Office Action dated April 29, 2005, and the patents and publications cited therein have been carefully reviewed, and in view of the following remarks reconsideration and allowance of all the claims pending in the application are respectfully requested.

The Rejection Under 35 U.S.C. § 103(a) Over Odagawa In View of A.R. Ferchmin

Claims 1-7, 10-16 and 22-35 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa et al. (Odagawa), U.S. Patent No. 6,436,526, in view of A.R. Ferchmin et al. (Ferchmin) (disclosed on page 13, lines 3-7 of the instant application).

Applicant respectfully submits that the present invention according to any of claims 1-7, 10-16 and 22-35 is patentable over Odagawa in view of A.R. Ferchmin. Applicant respectfully submits that the applied patents are not properly combinable to form a basis for rejection of these claims.

Contrary to the Examiner's statement, there simply is no suggestion in either Odagawa or A.R. Ferchmin "to modify Odagawa et al. by adding B in the range of 10-25 atomic percent to Co-Fe to make this alloy amorphous for the purpose of increasing current flow through the interface in a magnetic tunnel element." The Examiner admits that "Odagawa does not teach the atomic percent of B is added to CoFe to make this alloy amorphous." (See Office Action dated April 29, 2005, page 3, lines 3-5.) Consequently, Odagawa cannot suggest a modification "by adding B in the range of 10-25 atomic percent to Co-Fe to make this alloy amorphous for the purpose of increasing current flow through the interface in a magnetic tunnel element," as suggested by the Examiner.

Regarding A.R. Ferchmin, Applicant respectfully submits that the portion of the instant patent application cited by the Examiner only discloses "[c]rystalline Co-Fe alloys are well known to become amorphous when B is added to these alloys in the range of ~10-25 atomic percent." (See instant patent application, page 13, lines 3-7.) Accordingly, the instant patent application discloses nothing regarding "adding B in the range of 10-25 atomic percent to Co-Fe

to make this alloy amorphous for the purpose of increasing current flow through the interface in a magnetic tunnel element," as suggested by the Examiner.

For that matter, Applicant respectfully submits that neither Odagawa nor A.R. Ferchmin suggest the combination for any reason. Both are simply silent with respect to the other.

Thus, the present invention provides a magnetic tunnel element structure that is different from Odagawa by sandwiching a nominally crystalline interface layer material between amorphous materials. That is, the interface layer material is nominally crystalline when it is in isolation from both the claimed first layer and the claimed tunnel barrier layer. By forcing the nominally crystalline interface layer to be amorphous, the magnetic tunnel element structure provides a higher polarization than an Odagawa device.

Thus, Applicant respectfully submits that it is only by impermissible hindsight that the Examiner is able to reject claims 1-7, 10-16 and 22-35 based on the combination of Odagawa and A.R. Ferchmin. Neither of the applied patents provides a proper suggestion for combination. It is only by the Applicant's disclosure that the Examiner can select particular features of Odagawa and A.R. Ferchmin to make the rejection.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 1-7, 10-16 and 22-35.

**The Rejection Under 35 U.S.C. § 103(a) Over Odagawa
In View of A.R. Ferchmin And Further In View Of Parkin**

Claim 8 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa in view of A.R. Ferchmin and further in view of Parkin, U.S. Patent No. 5,341,188.

Applicant respectfully submits that the present invention according to claim 8 is patentable over Odagawa in view of A.R. Ferchmin and further in view of Parkin. In particular, Applicant respectfully submits that Parkin does not cure the deficiencies of Odagawa and A.R. Ferchmin with respect to having a proper suggestion for combination with respect to claim 1, the base claim of claim 8.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claim 8.

**The Rejection Under 35 U.S.C. § 103(a) Over Odagawa
In View of A.R. Ferchmin And Further In View Of Odagawa**

Claim 9 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa in view of A.R. Ferchmin and further in view of Onodera et al. (Onodera), U.S. Publication No. 2002/0168550.

Applicant respectfully submits that the present invention according to claim 9 is patentable over Odagawa in view of A.R. Ferchmin and further in view of Onodera. Applicant respectfully submits that Onodera does not cure the deficiencies of Odagawa and A.R. Ferchmin with respect to having a proper suggestion for combination with respect to claim 1, the base claim of claim 9.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claim 9.

The Rejection Under 35 U.S.C. § 103(a) Over Odagawa And A.R. Ferchmin

Claims 17 and 18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa and A.R. Ferchmin.

Applicant respectfully submits that the present invention according to either of claims 17 and 18 is patentable over Odagawa and A.R. Ferchmin. Applicant respectfully submits that neither Odagawa nor A.R. Ferchmin cure the deficiencies of Odagawa and A.R. Ferchmin with respect to having a proper suggestion for combination with respect to claim 1, a base claim of both claims 17 and 18.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 17 and 18.

**The Rejection Under 35 U.S.C. § 103(a) Over Odagawa
And A.R. Ferchmin And Further In View Of Saito**

Claims 19-21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa and A.R. Ferchmin and further in view of Saito et al. (Saito), U.S. Patent No. 6,556,473 B2.

Applicant respectfully submits that the present invention according to any of claims 19-21 is patentable over Odagawa and A.R. Ferchmin and further in view of Saito. Applicant respectfully submits that Saito does not cure the deficiencies of Odagawa and A.R. Ferchmin with respect to having a proper suggestion for combination with respect to claim 1, a base claim for each of claims 19-21.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 19-21.

CONCLUSION

In view of the above arguments, it is urged that the present application is now in condition for allowance. Should the Examiner find that a telephonic or personal interview would expedite passage to issue of the present application, the Examiner is encouraged to contact the undersigned attorney at the telephone number indicated below.

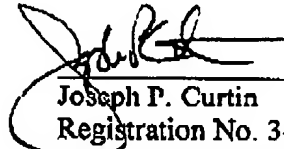
A petition for the necessary extension of time to file this response having an attached check and an authorization to charge a credit card in payment of the applicable extension fee has been submitted concurrently with this response.

A general authorization under 37 C.F.R. § 1.25(b), second sentence, is hereby given to credit or debit Deposit Account No. 09-0441 for the instant filing and for any other fees during the pendency of this application under 37 C.F.R. §§ 1.16, 1.17 and 1.18.

It is requested that this application be passed to issue with claims 1-35.

Respectfully submitted,

Date: October 28, 2005



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